IN THE SPECIFICATION:

Please amend paragraphs [022], [038] – [040], [043], [055], [058] and add paragraphs [030.1], [034.1], [[034.2], [062] as shown below, in which deleted terms are shown with strikethrough and/or added terms are shown with underscoring.

Also, please amend the heading between the title and paragraph [001], amend the heading between paragraphs [021] and [022], and amend the heading between paragraphs [034] – [035] as shown below.

Paragraph [022]

In order to solve the above-mentioned problems, according to the present invention, there is provided a manufacturing method for microcapsules comprising the steps of preparing an emulsion which contains a polyelectrolyte solution as a disperse phase having a uniform diameter, demulsifying the emulsion, and contacting the polyelectrolyte solution as a disperse phase with a polyelectrolyte solution having a reverse electric charge to that of the polyelectrolyte solution as a disperse phase or a polyvalent ion solution at the same time [[of]] as the demulsifying step so as to form a gel layer made of a polyelectrolyte complex around fine particles of the polyelectrolyte solution as a disperse phase by a polyelectrolyte reaction.

Paragraph [030.1] FIG. 4 (a) is a modification of the apparatus of FIG. 4 in which a division wall is provided in a substantially central area of one passage;

Paragraph [034.1] FIG. 9 is a schematic diagram showing another embodiment of a

manufacturing method for microcapsules according to the present invention,

Paragraph [034.2] FIG. 10 is a schematic diagram of a slight modification to the embodiment of FIG. 9.

Paragraph [038] The shape of the disperse phase in the emulsion is spherical. The diameter of the spherical disperse phase depends on the size of the holes. If the size of the holes is uniform, the diameter of the obtained disperse phase becomes uniform. The holes are formed by plasma etching which is used for manufacturing an integrated circuit. In addition, a more uniform disperse phase can be obtained by making the shape of the holes non-circular.

Paragraph [039] The emulsion prepared in the above-mentioned manner is put on or in contact with a polyelectrolyte solution having a reverse electric charge to the disperse phase or a polyvalent ion solution within a single vessel in a state of keeping the phase separation as shown in FIG. 2 (a), and thereafter the emulsion is demulsified.

Paragraph [040] The emulsion is demulsified by adding the same material as the continuous phase (hexane) or a ~~soluble~~ material [[to]] which is soluble in the continuous phase (such as soybean oil, triolein, or octane) to the emulsion so as to reduce the concentration of the surface-active agent in the continuous phase, or by originally not adding a surface-active agent to the continuous phase.

Paragraph [043] Next, embodiments of the present invention will be explained. FIG. 4 is a cross-sectional view of an apparatus for preparing an emulsion which is used in Examples 1 and 2. The apparatus for preparing an emulsion is comprised of an annular case 1, and plates 2, 3, 4 and spacers which are assembled within the case 1. The disperse phase flows through a liquid-sealed first passage 11, and the continuous phase and the emulsion flows through a liquid-sealed second passage 12. The first passage 11 and the second passage 12 are connected by narrow holes (microchannels) which are provided in the intermediate plate 3. P1 is a feeding pump for the disperse phase, P2 is a feeding pump for the continuous phase, and P3 is a withdrawing pump for the emulsion. A transparent window 13 and a CCD camera 14 are also provided in the apparatus.

Paragraph [055] For example, a division wall 5 may be provided in a substantially central area of the first passage 11 to divide the first passage into left and right sections as shown in FIG. 4(a). In this case, a disperse phase is supplied to the left section of the first passage by the pump P1 in the same manner as usual, and a polyelectrolyte solution having a reverse electric charge or a polyvalent ion solution is supplied to the right section of the first passage by another pump. With this, an emulsion is manufactured in an area on the upstream side of the second passage 12 where the disperse phase is supplied via the holes of the plate 3, and microcapsules are manufactured in an area on the downstream side (the right side of the drawing) where a polyelectrolyte solution having a reverse electric charge or a polyvalent ion solution is supplied via the holes of the plate 3.

Paragraph [058] The microchannels are formed on a glass base or a silicon base. As a means for allowing the continuous phase and the disperse phase to join, the passages of the continuous phase may be arranged to join with the passage of the disperse phase from [[the]] both sides at an angle of 30-80°. Also, as a means for reducing the flow rate in a dramatic way, a pool having a large volume of capacity may be provided. See FIGS. 9-10 schematically showing such manufacturing method for microcapsules according to the present invention, i.e., in FIG. 9 two passages of the continuous phase are arranged to join with the passage of disperse phase from both sides at an angle of 30-80°, and thereafter the flow rate of the joined phases is reduced in a dramatic was because they enter into a pool having a large volume of capacity; and in FIG. 10 only a single passage of the continuous phase joins to the passage of the disperse phase before entering into the pool.

Paragraph [062] Although there have been described what are the present embodiments of the invention, it will be understood that variations and modifications may be made thereto without departing from the spirit or scope of the invention as indicated by the appended claims.

Heading Between Title and Paragraph [001].

Background of the Invention

Technical Field

Heading Between Paragraphs [021] – [022].

~~Disclosure~~ Summary of the Invention

Heading Between Paragraphs [034] – [035].

~~Best Mode for Carrying Out~~ Detailed Description of the Invention